UNIVERSITÉ DE SHERBROOKE

Faculté d'éducation

Développer les compétences en matière de la promotion de la santé parmi les étudiants en techniques de physiothérapie grâce à l'apprentissage par le service

Developing Competence in Health Advocacy Among Physiotherapy Technology Students Through Service Learning

Par:
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RESUMÉ

La population canadienne vieillit et on peut se demander si notre système de santé sera capable de gérer toutes les difficultés auxquelles les gens sont confrontés en vieillissant. D'ici 2036, on prévoit que les personnes âgées de 65 ans et plus représenteront entre 23% et 25% de la population au Canada (Statistics Canada, 2010). Par conséquent, notre système de santé peut être confronté à une crise, car les gens auront de plus en plus de difficultés à accéder aux services nécessaires et les coûts pour les contribuables augmentent considérablement.

Les compétences en matière de la promotion de la santé impliquent la promotion des habitudes de vie saines avec le but de potentiellement réduire les risques de blessures et de développer certaines maladies chez les individus. Cependant, la formation des professionnels de la santé n'a pas officiellement abordé la question de la défense de la santé dans les programmes d'études, ce qui ne répond pas à ce besoin de la société. Étant donné que la promotion de la santé n'est pas abordée, les finissants des programmes de techniques de physiothérapie manquent des compétences essentielles pour s'engager dans une promotion efficace du bien-être et une prévention des maladies. En conséquence, les professionnels de la santé risquent de ne pas avoir la possibilité de participer à la diminution de risques de blessure et la prévention de développer certaines maladies chez leurs clients.

Ce projet vise à contribuer à la discussion sur la pédagogie dans l'éducation des professionnelles de la santé. Par une approche convergente des méthodes mixtes, cette étude a déterminé si et dans quelle mesure les attitudes des étudiants vis-à-vis d'un rôle de promoteur de la santé ont changé tout au long d'un cours d'apprentissage en service de gériatrie dans un programme de techniques de physiothérapie. Cette recherche identifie également dans quelle mesure les étudiants se sentent plus compétents pour s'engager dans le rôle de promoteur de la santé après ce type de cours. Dans le cadre du programme standard, 17 étudiants de troisième année ont suivi un cours d'apprentissage par le service de 15 semaines au cours duquel ils ont travaillé avec des personnes âgées qui vivent dans la communauté. Les élèves ont conçu des programmes d'exercices qu'ils ont proposés aux participants à toutes les semaines. Ils ont également cherché à identifier les risques potentiels dans les profils des personnes âgées et ont tenté de les traiter avec une éducation axée sur la prévention. Durant ce cours de 15 semaines, les étudiants ont réfléchi à leur apprentissage en utilisant quatre journaux de réflexion écrits à toutes les cinq semaines. Ces journaux étaient analysés à l'aide d'une analyse descriptive qualitative. Dans le cadre de cette étude, les étudiants ont également participé à une enquête avant et après le cours qui mesurait les changements dans leurs attitudes et leur niveau de compétence perçu en ce qui concerne le rôle de promoteur de la santé. Les données quantitatives ont été analysées statistiquement à l'aide de tests t.

Les données qualitatives ont révélé un changement significatif des attitudes et du niveau de compétence des étudiants après le cours d'apprentissage par le service. Au fur et à mesure que les étudiants acquéraient une connaissance plus solide de la promotion de la

santé et développaient des attitudes plus ouverts et optimistes vis-à-vis du rôle, ils étaient mieux placés pour engager la réflexion critique nécessaire à l'acquisition de ces compétences. Cela a été corroboré par les données quantitatives qui ont révélé un changement significatif des attitudes et de niveau de compétence auto-déclaré à la suite du cours d'apprentissage en service. Ces résultats suggèrent que l'apprentissage par le service pourrait être une stratégie pédagogique potentiellement intéressante pour les programmes qui aspirent à favoriser le développement des compétences en matière de la promotion de la santé chez leurs étudiants. Les résultats générés par cette étude pourraient éclairer l'élaboration et la planification du curriculum dans le cadre des programmes de techniques de la physiothérapie dans la province. Une telle pratique pourrait éventuellement améliorer la qualité des soins reçus par le public et la santé de la société

ABSTRACT

The population in Canada is aging and it is questionable whether our healthcare system will be able to manage all the difficulties that people face as they get older. By the year 2036, it is expected that seniors aged 65 and over will make up between 23% and 25% of the population in Canada (Statistics Canada, 2010). Consequently, our healthcare system may be facing a crisis as people have greater difficulty accessing necessary services and as cost to tax payers climb dramatically.

Health advocacy involves promoting health and wellness with the goal of potentially reduce individuals' risks of sustaining injuries and developing certain diseases. However, healthcare professional education has not been formally addressing health advocacy in curriculum thereby not meeting this societal need. As advocacy is not addressed, students emerging from Physiotherapy Technology programs are missing crucial attitudes and skills necessary to engage in effective wellness promotion and disease prevention . As a result, healthcare professionals may be missing out on valuable opportunities to engage in health promotion and potentially reduce people's risks of injuring themselves and developing preventable conditions.

This project aims to contribute to the discussion on pedagogy in healthcare worker education. Through a convergent mixed methods approach, this study determined whether and to what extent students' attitudes towards a health advocacy role changed throughout a Geriatrics service-learning course in a Physiotherapy Technology program. It also identifies to what extent students feel more competent to engage in health advocacy following this type of course. As part of standard curriculum, 17 third-year students engaged in a 15-week service-learning course during which they worked with seniors living in the community. Students designed exercise and wellness modules that they offered to community participants on a weekly basis. They also sought to identify potential risks in the seniors' profiles and attempted to address these risks with education that focused on prevention. During this course, students reflected on their learning by way of four reflective journals

that were written at 5-week intervals. These journals were analyzed using qualitative descriptive analysis. As part of this study, students also completed a pre-course and post-course survey that measured changes in students' attitudes and perceived level of competency with respect to the health advocacy role. Quantitative data was statistically analyzed using t-tests.

Qualitative data revealed a meaningful change in students' attitudes and perceived level of competency following the service-learning course. As students gained more robust knowledge of advocacy and developed more empowering, hopeful attitudes towards the role, they were in a better position to engage in the critical reflection needed to build their competency. This was supported by the quantitative data that revealed a significant change in both attitude and self-reported level of competency following the service learning course. These results suggest that service-learning could be a potentially interesting instructional strategy for programs that aspire to foster development of the advocacy competency in their students. The results generated by this study could inform curriculum development and planning in Physiotherapy Technology programs throughout the province. Such a practice has the potential to ultimately improve the quality of care received by the public and the health of society.

Key Words: Physiotherapy Technology, Health Advocacy, Service-learning

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LIST OF ABBREVIATIONS & ACRONYMS

AGS	American Gériatriques Society
CEGEP	Collège d'Enseignement Général et Professionnel
OPPQ	Ordre Professionel de la Physiothérapie du Québec
PEAC	Physiotherapy Education Accreditation Canada
PRT	Physical Rehabilitation Therapist
REB	Research Ethics Board
WCPT	World Confederation of Physical Therapy
WHO	World Health Organization

INTRODUCTION

The population in Canada is aging and it is questionable whether our healthcare system will be able to manage all the difficulties that people face as they get older. By the year 2036, it is expected that seniors aged 65 and over will make up between 23% and 25% of the population in Canada (Statistics Canada, 2010). To put this into perspective, it should be noted that this age group made up only 14% of the population in 2009. With increased risks of morbidity, injury and isolation, the growing elderly population will be exhausting the already limited resources of the public system. Healthcare costs to Canadian tax payers are already in the realm of $163 billion dollars per year and the structure of the current healthcare system is not necessarily meeting the specific needs of this population (Canadian Institute for Health Information, 2018). However, an alternative scenario is possible if the focus of the healthcare system were to shift towards a philosophy of prevention. This type of philosophy implies intervening with people before they are ill or injured and require emergency care. It means providing education, facilitating access to resources and promoting policy that favours healthy behaviours. If the public could use healthcare professionals as a resource for gaining knowledge and adopting attitudes of healthy living, fewer people would develop some of the conditions that lead to hospitalization and institutionalization. As stronger advocates, healthcare professionals could help seniors have the quality of life they want and deserve.

Health advocacy involves the promotion of healthy lifestyle habits through the delivery of knowledge, attitudes and resources to individuals, communities and society at large in order to promote better health for all. While this role is extremely important, it is not currently a priority in many healthcare education programs, particularly physiotherapy programs. At a recent summit, the World Confederation of Physical Therapy (WCPT) recognized the need for incorporating health promotion and disease prevention values into physiotherapy program curricula internationally (Dean et al., 2014). The curricula of Physiotherapy Technology programs in Quebec colleges are no exception.

This study aims to open the discussion regarding integrating more health promotion ideologies into the curricula of Physiotherapy Technology programs across the province. By exploring how the health advocacy competency develops in student Physical Rehabilitation Therapists (PRTs) during a service-learning course, this project could inspire other colleges to adopt similar models and help address this curricular gap.

In the context of a Geriatrics course, final-year Physiotherapy Technology students worked with elderly clients in a community centre and reflected on how their attitudes and competency levels changed throughout the semester. Data was collected through periodic reflective journals, which was a curricular objective, as well as pre-course and post-course surveys. The main objective of this study was to identify if and to what extent students' attitudes towards and perceived levels of competency with respect to the health advocacy role changed throughout a service-learning course.

CHAPTER ONE: PROBLEM STATEMENT

The Quebec healthcare system is made up of a multitude of professionals such as doctors, nurses, social workers, occupational therapists, physiotherapists and physical rehabilitation therapists that work collaboratively to improve the health of all Quebecers. In order to be effective, practitioners must show proficiency in several professional competencies or roles that are developed and evaluated throughout one's career. As part of the interdisciplinary healthcare team, Physical Rehabilitation Therapists (PRTs) demonstrate an expertise in restoring patients' physical function through exercise. These healthcare professionals are trained in Quebec colleges known as Collèges d'Enseignement Général et Professionnel (CEGEPs). CEGEPs are institutions of higher education that offer students either a bridge between high school and university or vocational training that prepares students for the job market. The training of PRTs consists of three years of study in a Physiotherapy Technology program offered in a Quebec CEGEP. The three-year technical program involves a variety of theoretical, practical and clinical education courses designed to ready students for the demands of the profession. For an outline of the program, please see the program brochure for the Physiotherapy Technology program of Dawson College in Appendix G.

The Ordre Professionnel de la Physiothérapie du Québec (OPPQ), the regulatory body that governs the Physiotherapy profession, outlines seven main competencies or roles that are essential to the practice of physical rehabilitation therapists (OPPQ, 2009). As this document uses the terms role and competency interchangeably, the present study will do the same. These competencies include expertise, collaboration, communication, management, advocacy, scholarly practice and professionalism.

While there are seven main competencies that make up the profile, only six of them are focused on by current Physiotherapy Technology program curricula in Quebec CEGEPs. The health advocacy role is not well-addressed by the traditional didactic and clinical education courses of physical therapy programs (Goulet & Tschoepe, 2018; Bezner,

2015; Bodner, Rhodes, Miller, & Dean, 2013; Reynolds, 2005). While many programs introduce health advocacy from a theoretical perspective, few programs develop the role practically or to a level of clinical competence (Bodner, Rhodes, Miller, & Dean, 2013). This is a problem as students are lacking opportunities to develop their self-efficacy with respect to the health advocate role.

One possible reason for this is that the introduction of the essential competency requirement by the OPPQ came well after the development of the ministerial competencies upon which the Physiotherapy Technology curriculum was built. The Physiotherapy Technology program has existed in Quebec CEGEPs since 1970. It was not until 2003 that the PRT profession was integrated into the Quebec Professional Order of Physiotherapists. By the time the OPPQ introduced the Essential Competency Profile for PRTs in 2009, the Physiotherapy Technology programs were already well-established.

As defined by the profile, advocacy involves educating clients in an effort to prevent disease and promote a healthy lifestyle (OPPQ, 2009). As professionals working in the Quebec healthcare system, Physical Rehabilitation Therapists need to be fully developed in all seven core competencies specified by the profile. As advocacy is not addressed, students emerging from Physiotherapy Technology programs are missing crucial attitudes and skills necessary to engage in effective wellness promotion and disease prevention. This is a major concern with respect to the potential benefits PRTs could have on public health. Physical rehabilitation therapists have the great luxury of working very closely with clients. As such, they are poised to help people adopt healthy behaviours and potentially reduce their risk for developing disease.

Finding a teaching-learning strategy that could help students to develop this competency is therefore extremely important. Service learning may be a way to achieve this with Physiotherapy Technology students. Service-learning is a pedagogical practice in which students become engaged with community service while fulfilling specific learning objectives. In this study, students were given the opportunity to practice their health

advocacy role by working with community-dwelling seniors at St. Raymond Community Centre in Montreal, Quebec. Throughout the experience, students reflected on what role they believe they play in reducing clients' risks for sustaining injuries and developing disease. Understanding how students' attitudes towards the health advocate role as well as how their feelings of competence change during a service learning experience in a Geriatrics course may help Physiotherapy Technology educators effectively implement this teaching-learning strategy and contribute to a more complete curriculum.

The Physiotherapy Technology program is offered at eight CEGEPs throughout the province of Quebec. All eight programs share the same ministerial competencies and therefore have similar curricula. If a gap exists in the curriculum of one program, it likely exists in the curriculum of other schools as well. Finding a way to fill this gap will ensure that graduates are fully developed with respect to the seven competencies required by the provincial regulatory body. This will in turn lead to more competent professionals and better healthcare for the public.

CHAPTER TWO: CONCEPTUAL FRAMEWORK

While curriculum shortcomings with respect to health advocacy development are evident in the literature (Goulet & Tschoepe, 2018; Bezner, 2015; Bodner, Rhodes, Miller, & Dean, 2013; Reynolds, 2005) this has been apparent in my own practice as well. As part of the faculty and Clinical Coordinator of the Physiotherapy Technology program at Dawson College for the past six years, I have had the opportunity to observe the competency development of our students. The current curriculum offers students the possibility to develop knowledge, skills and attitudes that will help them excel in their roles as expert, communicator, collaborator, manager, professional and scholarly practitioner. However, students lack authentic opportunities to develop their abilities to advocate for clients and engage in health promotion. The students gain profound knowledge in human anatomy, physiology and exercise prescription. Through practical courses and clinical education experiences, they develop their abilities to intervene with clients, communicate, and collaborate with the interdisciplinary team. They learn to be professionals and how to ensure their practice is grounded in the evidence. As mentioned above, the area in which the curriculum falls short of the required OPPQ competencies is how to transfer all of this knowledge and skill to advocate for their patients and society as a whole. This is an issue as the public is depending on healthcare professionals to lead them towards better health.

This is especially important with respect to the geriatric population. As this population is often quite vulnerable to disease, injury, and isolation, physical rehabilitation therapists need to be proficient in health advocacy. They need to have the ability to support and educate their clients about leading a healthy lifestyle and seeking appropriate care. If graduates of Physiotherapy Technology programs are unable to do this, a great opportunity to improve public health is being missed. This will continue to be an even greater issue as the geriatric population in Quebec and Canada is expected to rise over the coming decades (André, Fleury-Payeur, & Lachance, 2009, Statistics Canada, 2015).

How can this gap that is present in today's physiotherapy curriculum be filled? Some physical therapy educators have identified service learning as a viable teaching and learning method that can be used to develop students' advocacy role (Reynolds, 2005, Michaels & Billek-Sawhney, 2006). In order to explore this gap, the present study aims to understand how students in a Geriatrics course within a Physiotherapy Technology program develop their health advocacy role during a service-learning course. The development of the advocacy role throughout the course will be observed by studying the evolution of students' attitudes towards this role as well as their perceived level of competency with respect to the health advocate role.

The foundation of this study was based on the literature on service learning and advocacy competency development in Physiotherapy programs. Bringle and Hatcher's (1995) work on service learning in higher education will set the stage for this discussion. Reynold's, Beling's (2004), Michaels & Billek-Sawhney's (2006), Village's (2006) and Brown & Wise's (2007) research on the service learning approach in physical therapy programs as well as Dharamsi et al.'s (2010) and Stafford, Sedlak, Fok & Wong's (2010) work with medical students will also be explored. The pedagogy of service learning will also be uncovered by discussing its theoretical roots such as Dewey (1933) and Kolb (1984) as well as its links to modern practice such as Fink's taxonomy of significant learning (2013). In addition, the definition of health advocacy will be uncovered from a local and international perspective and frame the context for this research.

CHAPTER THREE: LITERATURE REVIEW

1. Literature Review

The following review of the literature will define key concepts such as competency, health advocacy and service learning as well as identify previous research in the area of service learning in physiotherapy education. The theoretical roots of service learning will also be explored in order to understand its pedagogy. The literature review will conclude with a summary of the research that informed the methodology for this project.

1.1 Defining Competency

Many definitions of the term competency are offered in the literature. As the physiotherapy profession is considered to be in the medical field, the definitions offered by medical education research will be considered here. According to the International Collaborators for Competency-based Medical Education, competency is defined as "an observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes" (Frank et al., 2010, p. 641). A more descriptive definition is proposed by Epstein and Hundert (2002) who define professional competence as "the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for the benefit of the individual and community being served" (p. 226). While one definition is more succinct and the other more elaborative, both definitions offer similarities in terms of what is meant by competency. Not only does competency require sufficient knowledge and practical skills, but it is dependent upon certain beliefs and attitudes. Furthermore, Albanese et al. (2008) add personal qualities as an additional element that makes up the definition of competency. Taking this definition a step further, Goudreau et al. (2009) describe competency as a strategic execution of all the elements that contribute to competency in reaction to specific situational demands. For this study, competency will be defined as a student's ability to access their knowledge, use their skills and harness the helpful attitudes required to engage in health advocacy.

While it is important to understand how professional competency is defined in healthcare education, it is also important to know why it is important. When describing the rationale for Competency-based medical education, Frank et al. (2010) promote the importance of focusing on the outcomes of student learning. They state that universities must ensure that graduates demonstrate competency in all crucial aspects of practice to be truly accountable to the public. This idea is certainly not exclusive to medical professionals. It is vital that all healthcare professionals graduate with competence in all areas that pertain to their practice in order to offer the highest quality of care possible.

1.2 Defining Health Advocacy

Professional competencies are what define the identity of professional practice in the medical field. The Ordre Professionnel de la Physiothérapie du Québec (OPPQ) developed the Profile of Essential Competencies for Physical Rehabilitation Therapists (PRTs) with the purpose of making PRTs aware of the diverse roles they play and guiding their professional development (OPPQ, 2009). The profile was adapted from the Essential Competency Profile for Physiotherapists in Canada which was previously based on the CanMEDS competency framework for Canadian Physicians. As a result, these profiles share many similarities with respect to the competencies they promote. This allows for greater interprofessional collaboration amongst these healthcare professionals (PEAC, 2012). According to the PRT Profile, advocacy is defined as "responsibly using ... knowledge and expertise to promote the health and wellbeing of individual clients, communities, populations and the profession" (OPPQ, 2009, p. 8). This can be likened to the World Health Organization's (WHO) core competency of public health perspective. According to the WHO, "the health care workforce must be engaged in the full range of advocacy, disease prevention and health promotion activities relevant to the population served" (WHO, 2005, p.45). With this competency, healthcare workers are being asked to consider the health of communities and the population, rather than only focusing on the care of individual clients. Examples of this may include assisting the community in determining and satisfying their health needs as well as working towards health equity.

While the Professional Competency Profile pertains to Quebec clinicians, the role of health advocate appears to be valued internationally. During the Second Physical Therapy Summit on Global Health, delegates from the World Confederation of Physical Therapy (WCPT) developed an action plan for the integration of health promotion in physiotherapy practice (Dean et al., 2014). Recognizing the important role that physiotherapy should play in the prevention of non-communicable diseases, the action plan notes many strategies aimed at increasing the frequency with which clinicians take on this role. One of the strategies is to make "community-based rehabilitation part of the curriculum in physical therapy education" (Dean et al., 2014, p. 265). This is in line with the Commission on Accreditation in Physical Therapy Education's practice management expectation on prevention, health promotion, fitness and wellness (American Physical Therapy Association, 2014I). This expectation requires the curriculum of physical therapy programs to include objectives that develop students' abilities to "provide culturally competent physical therapy services for prevention, health promotion, fitness, and wellness to individuals, groups, and communities" (CC-5.50) as well as "apply principles of prevention to defined population groups" (CC-5.52) (p. 35). Although similar, the requirement for Physical Therapy Assistant Programs is slightly different. For this category of professional, curricular objectives should include "demonstrating an awareness of social responsibility, citizenship, and advocacy, including participation in community and service organizations and activities" (American Physical Therapy Association, 2014II, p. 28).

The focus on prevention is especially important in geriatrics care (Eleazer et al, 2000). In their recommendations of core competencies for the care of older patients, the American Geriatrics Society (AGS) identifies key knowledge, skills and attitudes that should be possessed by healthcare professionals. It is recommended that these competencies be integrated into the curricula of medical schools. The prevention theme emerges in both the knowledge and attitude categories. The AGS recommends that medical professionals adopt attitudes that focus less on disease and more on optimizing the functional capacity of older adults. They stipulate the importance of having knowledge of

primary and secondary prevention strategies in an effort to prolong people's functional independence and prevent disease.

While the importance of the advocacy role in physiotherapy practice is well-known, gaps between the espoused competency development and current physiotherapy curricula are present. The WCPT's action plan for the integration of health promotion into physiotherapy practice identifies several challenges (Dean et al., 2014). While "health-focused physical therapy" is identified as an important theme, it is not usually present in traditional clinical placements. This is echoed by Reynolds (2005) who observed the lack of opportunities within physical therapy programs to develop students' competency in the areas of advocacy, prevention, and wellness promotion. A potential method of correcting this lacuna is the implementation of service-learning projects.

1.3 Defining Service Learning

According to Kuh (2008), service learning is a high-impact pedagogical practice that can be used to promote students' academic success and engagement in the classroom. With roots in Kolb's (1984) experiential learning and Dewey's (1933) philosophy of "learning by doing," service-learning offers students a hands-on approach to knowledge and skill acquisition. The Health Professions Schools in Service to the Nation (HPSSN) define service-learning as "a structured learning experience that combines community-service with explicit learning objectives, preparation, and reflection (Seifer, 1998, p. 274). This definition is based on a multitude of definitions found in the literature including that offered by Bringle and Hatcher (1995). These authors define service-learning as

> a course-based, credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility. (p. 222)

Bringle and Hatcher are careful to include a “credited” aspect to their definition, implying that there is an added level of responsibility and commitment required by students. They explain that service-learning differs from volunteer work in that the former offers students concrete learning opportunities through guided reflection amidst various learning activities. A distinction between service-learning and clinical education is also made by highlighting the tendency for clinical education to focus solely on skill-development (Bringle & Hatcher, 1995; Seifer, 1998).

Service learning also offers students the opportunity to become engaged with their role as citizens of a functioning society ((Bringle & Hatcher, 1995, Seifer, 1998, Brown & Wise, 2007). This pedagogical approach allows for the notion of civic responsibility to be integrated into course objectives (Bringle & Hatcher, 1995). Seifer (1998) argues that the roles of student and citizen are merged in service-learning activities, allowing students to gain insight into the opportunities they have to contribute to social change. This is especially important for students in health care programs and consistent with the program approach offered by Quebec CEGEPs.

For this research, service-learning will be defined as an instructional strategy that allows students to participate in community-service in order to achieve specific pedagogical objectives through their active participation and critical reflection. Given the context of this study, the specific pedagogical objectives include improving competence with respect to the health advocacy role of PRTs and increasing students’ sense of social responsibility towards the betterment of public health.

1.4 Pedagogy of Service Learning

Service learning is an instructional strategy that has roots in a multitude of pedagogical and philosophical theories. Firstly, Dewey’s (1933) philosophy of education and experience has led some authors to conceptual frameworks that underpin service-learning (Carver, 1997; Giles & Eyler, 1994). Using Dewey as a foundation, Giles & Eyler

(1994) define the "principles of experience, inquiry, and reflection as the key elements of a theory of knowing in service-learning" (p. 79). This connects to Carver's (1997) notion of service-learning as a means of producing learning opportunities that promote Dewey's principle of continuity. This author states that service learning experiences are integrative whereby students experience, reflect, inquire and perhaps change beliefs (Carver, 1997). Giles & Eyler (1994) go on to illustrate Dewey's idea of acquiring knowledge that is tied to an experience in order for it to be remembered and usable in the future. This has ties in to Kolb's (1984) Experiential Learning whereby students construct knowledge in the context of a situation (Reynolds, 2005). Reynolds (2005) also makes the link between service learning and Brown, Collins & Duguid's (1989) Situated Cognition. Service-learning provides a vehicle for the interaction between what the students are doing, the context of the activity and the culture of the environment that is necessary to promote deep learning according to these authors.

The experiential learning and critical reflection involved in service learning promote the objectives supported by Fink's (2013) taxonomy of significant learning (Barnes & Caprino, 2016). Fink's taxonomy of significant learning is a framework that inspires teachers to create better learning experiences for their students. The underlying rationale is to create learning environments in which students are engaged and are able to make meaning of the world in such a way that "they will clearly have changed in some important way" (Fink, 2013, p. 7) The taxonomy consists of six categories of significant learning including foundational knowledge, application, integration, human dimension, caring and learning how to learn. Barnes & Caprino (2016) have revealed that all six elements of Fink's taxonomy may be stimulated using service learning models. This is a useful insight for competency-based healthcare education as many of these elements lend themselves to the caring professions.

1.5 Service Learning in Physiotherapy

Several studies have demonstrated the positive impact on learning as well as skill and attitude development within physical therapy programs (Anderson, Taylor & Gahimer, 2014; Nowakowski, Kaufman & Pelletier, 2014; Michaels & Billek-Sawhney, 2006; Reynolds, 2005; Beling, 2004; Village & Village, 2001). Some authors have demonstrated the improvement in attitude towards elderly clients following a service learning approach in a geriatrics course (Beling, 2004). Other authors have observed how students' professional behaviour has improved during a service learning experience (Anderson, Taylor & Gahimer, 2014; Wise & Yuen, 2013; Village, 2006).

Service learning has also been shown to be an effective method for teaching students about the knowledge, skills and attitudes needed for advocacy and wellness promotion in physical therapy (Brown & Wise, 2007; Nowakowski, Kaufman & Pelletier, 2014; Michaels & Billek-Sawhney, 2006; Reynolds, 2005; Beling, 2004; Musolino & Freehan, 2004). Brown & Wise (2007) demonstrated the effectiveness of service learning on physical therapy students' perceived ability to practice health promotion and prevention. Students participated in screening evaluations with high school students where they had the opportunity to practice educating clients on the risks associated with poor posture. Michaels & Billek-Sawhney (2006) used service learning in a geriatrics course to teach advocacy to physical therapy students working with elderly clients. Students performed fall risk assessments and gave clients advice regarding fall prevention. They were also given the chance to advocate for patient care with clients' physicians. Students' abilities to promote health and wellness have also been shown to be improved by service learning through the correction of misconceptions of older adults (Nowakowski, Kaufman & Pelletier, 2014). By engaging in a long-term service-learning project, students modified their impressions about the physical strength and abilities of their elderly clients, making them more effective with their recommendations for exercise. In addition, Reynolds (2005) explained how service learning can provide students with the experiential learning that develops competency in areas of health advocacy as defined by the expectations of the American Physical Therapy

Association. This author questions whether physical therapy students would be able to develop this competency if not given these experiential learning opportunities.

1.6 Summary

Although some research has been done, Musolino & Freehan (2004) and Reynolds (2005) suggest the importance of continuing research on student outcomes following service-learning experiences in professional health programs. Despite the existence of some research on service learning in physical therapy programs, the majority of studies have been conducted in the United States. Thus, there is a need for more research in this area. Furthermore, the PRT profession is one that is unique to Quebec as it allows for greater professional autonomy than the physical therapy assistant profession found in the rest of Canada and the United States. As such, there is a need for research on the development of the health advocacy role in PRT education as it may differ from that of physiotherapist education. Finally, as the area of developing health advocacy competence through service-learning in PRT education is quite new and ill-defined, there is a need for qualitative inquiry to open the door to further research.

In addition, Village (2006) described four main qualities of effective service learning in physiotherapy programs. These themes include strong support from the academic institution, collaboration between students, faculty, community partners and other stakeholders, meaningful service for both students and community partners, and pointed reflection activities for students. Kruger & Pearl (2016) highlight the importance of consciously selecting service learning activities that connect to academic themes that are being addressed by the parent course. They also state that service learning must be based on needs identified by the community and that reflection is a critical component of the experience.

The methodology of this study was based on a foundation of examples from the literature. The qualitative methodology was based on Dharamsi et al.'s (2010) work with a

sample of three medical students during an international service learning opportunity. Although the subjects were not physical therapy students, this research is particularly relevant to the current study as it involves the same definition of advocacy that is used in the OPPQ's Profile of Essential Competencies for Physical Rehabilitation Therapists (OPPQ, 2009). In this study, the authors used a phenomenological approach in order to gain a deep understanding of students' experiences. The students were asked to write reflective journals as well as essays about the experiences they were living while working on a community-based project in Uganda. These journals were meant to give students the opportunity to think about how their view of the CanMEDS Health Advocacy role was changing. The method of data analysis for this study was the critical incident technique. While reflective journals will be used as a research instrument for the present study, the essay-writing used by Dharamsi et al. (2010) will not be adopted. The rationale for this is to minimize the impact on participating students' workloads. As reflective journal writing was already part of the Geriatrics course, participating in the study would have minimal impact on students' already heavy workloads. Also, the data analysis method of critical incident technique that was used by Dharamsi et al (2010) will not be employed as a more pertinent method (qualitative descriptive analysis) has been identified. Difficulties with responding to the research questions were anticipated with the use of critical incident technique in this study.

The quantitative methodology for this study was based on work done by Stafford, Sedlak, Fok & Wong (2010) with 76 internal medicine residents at the University of British Columbia. Following an academic retreat that focused on developing the health advocacy role, students were asked to complete a Health Advocacy Questionnaire created by the authors. This questionnaire assessed students' attitudes towards the health advocacy role and their preparedness to adopt this role. In order to create the questionnaire, the authors collected written reflections of seven internal medicine residents that had participated in a community outreach activity. Using the information collected, the authors created the questionnaire and established face validity by having these residents review the instrument. The authors also had the questionnaire reviewed by an expert panel of physicians in order

to establish content validity of the tool. This panel consisted of internists from different areas of practice including urban settings, rural settings, academia and international work. All of the members of the panel had important experience with health advocacy that led them to be experts in the subject. While content and face validity were confirmed, there is still a need for more testing on this tool as internal reliability has yet to be established.

2. Research Questions and Hypotheses

The following research questions will be addressed by this study:

1. Do students' attitudes towards the health advocacy role of physical rehabilitation therapists change throughout a service learning experience within a Geriatrics course of a Physiotherapy Technology program? If so, how do they change? These research questions lead to the following hypothesis:

    H1: There will be a significant difference in students' attitudes towards the health advocacy role of physical rehabilitation therapists.

2. To what extent do students feel more competent about their role as health advocates following a service learning experience within a Geriatrics course? This research question led to the following hypothesis:

    H2: Students' perceived level of competency will be significantly different at the end of a service learning course when compared to the beginning of the course

CHAPTER FOUR: METHODOLOGY

1. Target Population and Sample Characteristics

The target population for this study was CEGEP students that were in the process of completing their fifth term of the Physiotherapy Technology program. At that point in the program, students had not been exposed to the advocacy role nor had they any experience with service learning. The sample that was used for this study was a sample of convenience that consisted of the 17 students enrolled in the Geriatrics course of the Physiotherapy Technology program at Dawson College. Please see Table 1 for the descriptive statistics of the participants. This three-year technical program prepares students over six semesters to work as Physical Rehabilitation Therapists after graduation. For more information on the program, please see Appendix G for the program brochure.

Table 1:
Descriptive Statistics of Participants

		n	%
Gender	Male	1	5.9%
	Female	16	94.1%
Previous Education	High school	17	100%
	CEGEP experience in another program	13	76.5%
	University experience	4	23.5%
Age	Mean	23.5 years	
	Range	20 – 48 years	

2. Research Design

A convergent mixed methods approach was used for this study. Qualitative inquiry was conducted in order to gain insight into students' attitudes towards the health advocacy role and observe if and how these attitudes changed following a service-learning course. It

was also used to explore to what extent students' perceptions of their level of competence in acting as health advocates changed over the 15 weeks of the course. Quantitative measures of these two variables were used to triangulate the data collected from the qualitative component of the study. In this case, the service learning model was the independent variable and students' attitudes towards the health advocacy role as well as their perceived level of competence in carrying out this role were the dependent variables.

2.1 Research Instruments

2.1.1 Qualitative Data

Students' written reflections were collected in the form of four journals that were created at the beginning, during and at the end of the service learning experience. By answering prompting questions such as: what does it mean to be an advocate? and how prepared do you feel to advocate for geriatric clients?, students described their perceptions of a PRT's role as a health advocate and the students' own perceived level of competency to carry out this role. Please see Appendix A for a complete list of journal prompts. Data from the journal responses included students' understanding of the advocacy competency, beliefs about the role of PRTs that work in the community and students' perceptions of their developing abilities and readiness to play the role of health advocate. Having this information shed light on how students' attitudes towards health advocacy change throughout the service learning experience. This methodology was adopted from Dharamsi et al.'s (2010) study of medical students' awareness of the CanMEDS health advocacy role.

2.1.2 Quantitative Data

A Health Advocacy Questionnaire was also administered at the beginning and at the end of the service learning experience. Students took approximately ten minutes of class time to complete a paper copy of the survey. Some of the items of the survey included: "I feel that my role as a health advocate extends beyond the individual patient(s) I am treating" and "my current knowledge about health advocacy has increased compared to 3

months ago." Please refer to Appendix B for the entire questionnaire. The purpose of the survey was to identify changes in students' attitudes towards the health advocacy role and their perceived levels of competency of fulfilling this role. The survey was adapted from the Health Advocacy Questionnaire created by Stafford, Sedlak, Fok & Wong (2010). Permission from Dr. Roger Wong, one of the creators of this tool, was obtained through electronic mail (Appendix F). The questionnaire developed by these authors included 18 items, 14 of which were 5-point Likert scale questions and four of which were multiple choice or short answer questions. When adapting the questionnaire, only the 14 Likert-scale questions were retained as the additional four questions were either not pertinent to the current study or captured in the reflective journal prompts. Other adaptations to the original questionnaire included substituting references to medical interns with the PRT profession and adapting timeframes to reflect the actual duration of the service-learning course. As the tool was only minorly adapted to fit the purpose of this study, the content and face validity of the tool that were established by Stafford, Sedlak, Fok & Wong (2010) should still apply. However, there is a need for more testing on this tool as internal reliability has yet to be established.

2.2 Data Collection

During week 1 of the course, students were introduced to the service-learning model, which is a standard component of the Geriatrics course. The course outline was explained, describing the assessments and learning activities required in the course. In order to ensure a voluntary consent process, the principle investigator, who is also the course instructor, left the class and a third-party research assistant introduced the study and explained what participants would be asked to do if they chose to be part of the study. Students were advised that there are no known risks or benefits to participating in the study and that the students' decision to participate or not in the study will have no bearing on their academic outcome. Students were also informed that if they chose to participate, they could also withdraw at any time. The students were then invited to participate in the study, ask any questions they may have and then sign the consent form if they so wished. Please

see Appendix C for a copy of this consent form. The third party then administered the Health Advocacy Questionnaire to participants of the study by means of a paper copy. Participants took approximately ten minutes of class time to complete the survey. This served as a baseline measure prior to the service learning experience. Please see Appendix B: Health Advocacy Questionnaire for a copy of this survey.

During week 1, all students completed a journal on their beliefs about their role as a health educator and wellness advocate when working with the geriatric population. Please see Appendix A: Journal Prompts for more details. As this was a standard part of the work for this course, this activity was not reserved for study participants.

During weeks 2 to 15, all 17 students participated in the service-learning aspect of the course. This consisted of the students running an exercise and wellness program for seniors at St. Raymond Community Centre in Montreal, Quebec. St. Raymond Centre is a community organization that focuses on promoting the well-being and improving the quality of life of the citizens that it serves. Part of its mission is to advocate for the physical activity and leisure needs of the individual and the community. Although it offers many programs for children and adolescents, there was a lack of physical activities for seniors. While programs had been put in place in the past, they were forced to close when the funding that made these programs possible ended. Holding a service-learning course at St. Raymond centre helped meet a community need and provided hands-on experience for students in their final year of their college program.

In groups of three or four, students designed and animated weekly exercise modules that focused on teaching seniors a variety of exercises that would improve their level of function and overall fitness. The program attracted a group of approximately 20 elderly participants that attended regularly. The exercise modules also contained mini-workshops that focused on educating program participants about fall prevention and safe mobility. For example, a workshop on walking safely in the winter was included. In addition to the group exercise animation, students were randomly assigned one or two elderly participants to

monitor throughout the course. The students performed tests and measures on individual participants to assess their level of function. They also interviewed participants to obtain information about their medical histories and psychosocial situations. Students analyzed this data and identified risk factors in the participants' profiles that could increase their risk for disease or injury. Students then provided information to participants regarding how to reduce these risks. Throughout the process, students reflected on their learning and professional development.

During weeks 5, 10 and 15 all students once again completed journals describing their view of the advocacy role in Physiotherapy Technology. In week 15, participants of the study were again asked to complete the Health Advocacy Questionnaire in order to obtain a post service learning measure. For a summary of activities that were undertaken by study participants compared to activities that were undertaken by all students enrolled in the course, please refer to Table 2.

Table 2:
Summary of Activities Related to Student Participation

	All students	**Study participants**
# of week in semester	Weeks 2-14	Weeks 2-14
Pre-activity survey	N/A	Week 1
Reflective journals	Weeks 1, 5, 10, 15	Weeks 1, 5, 10, 15
Post-activity survey	N/A	Week 15

2.3 Data Analysis

2.3.1 Qualitative Data Analysis

The content of the participants' journals were analyzed using qualitative descriptive analysis (Sandelowski, 2000). Using the methods proposed by Colorafi & Evans (2016), conventional content analysis was used as this method can be used to present a portrait of the data in cases where there is little existing theory, as is the case for this study. Although

16 students completed all four journals, a sample of 5 participants was randomly chosen for analysis. This was done to preserve the feasibility of completing the project. During the first level of coding, the four journals of the 5-participant sample were analyzed using a line-by-line coding method (Colorafi & Evans, 2016; Saldaña, 2015). The texts were divided into meaning units which consisted of several words or sentences that communicated a specific idea. A code was attributed to each meaning unit, resulting in an extensive list of codes. During second-level coding, the individual codes were grouped together, and several categories and subcategories began to emerge. These categories were subsequently organized under three overarching themes. Finally, the journals of 2 additional participants that were not part of the original sample were chosen and analyzed. The codes identified in these journals were compared to the list of codes produced by the coding of the sample of 5. As no new codes were identified, it was assumed that saturation had been obtained.

These methods were chosen as they would allow the researcher to "stay closer to (the) data" (Sandelowski, 2000, p. 336) while drawing conclusions that could speak to the utility of service-learning as an instructional strategy. Using this framework to analyze data from student journals gave insight into how students' attitudes changed as well as how students developed their advocacy competency.

2.3.2 Quantitative Data Analysis

Survey results were analyzed using statistical analysis. The survey responses of 16 participants were entered into an Excel spreadsheet for analysis. A numerical value was assigned to each response on the Likert-scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Although 17 participants completed the week 15 survey, the survey results of one participant was not analyzed. This participant had not initially completed the week 1 survey and therefore there was no baseline for comparison. The quantitative data was used to triangulate the findings of the qualitative component of this study.

3. Ethical Considerations

The main ethical issue for this study is the fact that the main researcher was conducting research on students from her class. This created a conflict of interest as the researcher had the responsibility to evaluate and assign grades to her students' work. In an effort to avoid the perception of potential bias, a third-party recruited study participants and obtained informed consent from the students that wished to participate. The third-party explained to students that there are no anticipated risks or benefits to participating in this study. They also informed students that their desire to participate in the study would have no bearing on students' grades, advancement or any other academic consequence. All of this information was be presented both verbally and in writing via the Information and Consent Form (Appendix C).

The third-party also collected and de-identified the students' written reports and surveys which were the research instruments for this study. Furthermore, the data was only analyzed following the submission of final grades for the course. At the time of data analysis, the researcher was no longer the teacher of the participants of the study. In addition, in order to maintain complete participant anonymity, the identities of participants were never revealed by the third-party. The researcher analyzed data based on a participant identification number that was attributed to participants by third-party.

An application to the Dawson College Research Ethics Board (REB) was submitted on July 23, 2018. Due to the vacation period, the REB was only scheduled to meet to review this application on September 5, 2018. As the pre-test for the Health Advocacy Questionnaire was scheduled to be administered in Week 1 of the semester, the pre-test would have had to be administered on August 28, 2018. In an attempt to respect the planned protocol, the principal investigator contacted the Chairperson of the Research Ethics Board to seek permission to administer the questionnaire with REB approval pending in order to obtain a baseline for the project. The Chairperson approved the administration of the pre-test in order to preserve the scientific integrity of the study. Please see Appendix E for this correspondence. On September 21, 2018, the current study received

ethics approval from the Dawson Research Ethics Board. Please see Appendix D for the certificate of ethics approval.

In order to ensure trustworthiness of the data, certain practices were carried out. Peer validation of the data took place on several occasions. This was done by presenting the data and analysis to the research supervisors for verification. This validation took place with both virtual document sharing and face-to-face meetings. This was done to reduce potential bias as the primary researcher was the instructor of the course. In addition, the primary researcher engaged in reflexivity throughout the entire research process. During data analysis, the primary researcher wrote memos to document ideas and connections to the data. They reflected on their own assumptions and knowledge gaps and sought resources such as literature and support from more experienced researchers to address these.

CHAPTER FIVE: RESULTS

For this study, two hypotheses were formulated. The first hypothesis, H1, was that there will be a significant difference in students' attitudes towards the health advocacy role of physical rehabilitation therapists. The second hypothesis, H2, was that Students' perceived level of competency will be significantly different at the end of a service learning course when compared to the beginning of the course. The following section will present the quantitative and qualitative results of this study and demonstrate testing of the hypotheses.

1. Quantitative Results

The survey responses were analyzed several ways. Firstly, a *t*-test was used to compare the means of Week 1 and Week 15 responses to each of the 14 survey questions. A significant difference was noted in the responses to all questions except for Q1. This was likely due to the Week 1 mean response being initially quite positive. The tests for Q2 through Q14 returned *p* values that were all less than 0.05, indicating a significant difference from Week 1 to Week 15. See Table 3 for the statistical analysis of the responses to each question individually. A significant change was confirmed by a *t* test that compared the mean responses of Week 1 and Week 15 for all of the questions in the survey. A p-value that is smaller than 0.05 was noted as seen in Table 4..

Table 3:
Table of statistical analysis of week 1 and week 15 survey results analyzed by question

Survey Questions	Week 1 (Pre-course) Responses Mean (SD)	Week 15 (Post-course) Responses Mean (SD)	*t*	df	*p*
Q1. It is part of my job as a PRT to advocate for populations' health needs within society.	4.5 (0.63)	4.75 (0.45)	2.13145	15	0.10
Q2. I feel that my role as a health advocate extends beyond the individual patient(s) I am treating.	3.75 (0.58)	4.375 (0.72)	2.13145	15	0.003*
Q3. I am able to identify the health needs of an individual patient during patient care (beyond physical rehabilitation needs).	3.5 (0.82)	4.3125 (0.48)	2.13145	15	0.003*
Q4. I can describe the health needs of the communities that I serve.	3.3125 (0.87)	4.1875 (0.66)	2.13145	15	0.004*
Q5. I can identify the determinants of health (psychological,	3.25	3.8125	2.13145	15	0.04

biological, social, cultural and economic aspects) of patients in my community.	(0.77)	(0.66)			5*
Q6. I can describe how public policy influences the health of populations that I serve.	2.6875 (1.14)	3.375 (0.96)	2.13145	15	0.02 *
Q7. I can describe the requirements inherent in health advocacy, as described by the OPPQ (Ordre professionnel de la physiothérapie du Quebec)	2.5625 (1.09)	3.5625 (0.81)	2.13145	15	0.01 *
Q8. I understand the opportunities available for PRTs to function as health advocates.	3.25 (1)	3.9375 (0.85)	2.13145	15	0.00 7*
Q9. I am able to help my patient(s) navigate the health care system.	2.8125 (1.11)	3.5625 (0.73)	2.13145	15	0.00 3*
Q10. My current competence in being a health advocate has increased compared to 3 months ago.	3.5 (0.97)	4.5625 (0.51)	2.13145	15	0.00 2*
Q11. My current knowledge about health advocacy has increased compared to 3 months ago.	3.25 (1)	4.5625 (0.51)	2.13145	15	0.00 002*
Q12. Compared to 3 months ago, I feel more able to practice health advocacy in ways I would not have otherwise done during a regular clinical rotation.	3.125 (0.96)	4.375 (0.62)	2.13145	15	0.00 05*
Q13. The current likelihood of my engaging in health advocacy activity/activities has increased compared to 3 months ago.	3.3125 (1.01)	4.5 (0.52)	2.13145	15	0.00 1*
Q14. I am more likely to recommend health advocacy activity/activities to others compared to 3 months ago.	3.5 (1.03)	4.5625 (0.63)	2.13145	15	0.00 3*

***p* < 0.05, n=16**

Table 4:
Table of statistical analysis of week 1 and week 15 survey results – all questions combined

Survey Questions	Week 1 (Pre-course) Responses Mean (SD)	Week 15 (Post-course) Responses Mean (SD)	*t*	df	*p*
All Questions Combined	3.308036 (0.48)	4.174107 (0.44)	2.16	13	0.000000068*

***p* < 0.05**

In order to more closely examine the change in attitude and perceived level of competency, the survey questions were clustered according to these two themes for another round of statistical analysis. To identify change in attitude towards the advocacy role, questions 1, 2, 13 and 14 were selected as these questions address feelings and beliefs about advocacy. A *t*-test that compared the mean responses for Week 1 and Week 15 of these four questions revealed significance with a p-value that is smaller than 0.05 (See Table 5).

Table 5:
Table of statistical analysis of week 1 and week 15 survey results - questions related to attitude towards advocacy role

Survey Questions	Week 1 (Pre-course) Responses Mean (SD)	Week 15 (Post-course) Responses Mean (SD)	*t*	df	*p*
Attitude-related questions (Q1, Q2, Q13, Q14)	3.77 (0.52)	4.55 (0.16)	3.18	3	0.00000006 8*

***p* < 0.05**

When exploring changes in perceived level of competency, questions 3 through 12 were grouped together as these questions probed about knowledge and ability. In this case, significance was once again uncovered as a t-test of the mean Week 1 and 15 responses to Q3 through Q12 generated a p-value that is smaller than 0.05 (See Table 6).

Table 6:
Table of statistical analysis of week 1 and week 15 survey results - - questions related to advocacy competency level

Survey Questions	Week 1 Responses (Pre-course) Mean (SD)	Week 15 Responses (Post-course) Mean (SD)	*t*	df	*p*
Competency-related questions ((Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13)	3.13 (0.33)	4.03 (0.44)	2.26	9	0.0000012*

***p* < 0.05**

2. Hypothesis Testing

H1: There will be a significant difference in students' attitudes towards the health advocacy role of physical rehabilitation therapists

To address the first hypothesis, an examination of the results presented in Table 4 is needed. As a significant difference between the week 1 and week 15 answers to survey questions 1, 2, 13 and 14 was observed ($p < 0.05$), the H1 hypothesis may be retained. This reveals that there was in fact a significant change in students' attitudes towards the health advocacy role of physical rehabilitation therapists.

H2: Students' perceived level of competency will be significantly different at the end of a service learning course when compared to the beginning of the course

To address the second hypothesis, the results presented in Table 1.4 may be considered. As there was a significant difference between the week 1 and week 15 responses to the survey questions related to perceived level of competency ($p < 0.05$), the H2 hypothesis may be retained. This indicates that students had a significant change in perceived level of competency at the end of a service-learning course when compared to the start of the course.

3. Qualitative Results

The journal data from this study revealed three overarching themes: foundations of advocacy knowledge, attitudes towards the advocacy role and mastery of advocacy competency. These themes are closely interconnected in that a student's knowledge about and attitudes towards advocacy influence their competency mastery. When a student has a positive, open attitude to their advocacy role and they possess sufficient knowledge about advocacy, they are well-suited to engage in the continuous reflection that is critical to ongoing competency development. Figure 1 demonstrates the relationship between these three themes.

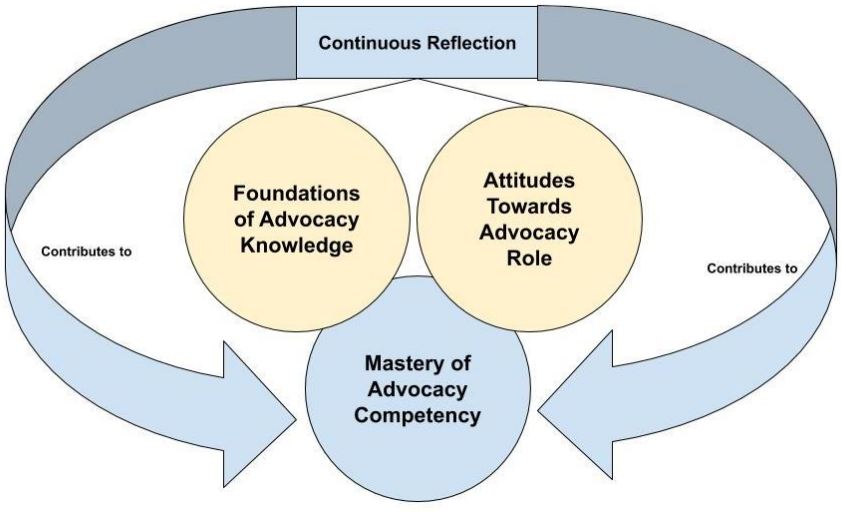

Figure 1: Representation of the interconnectedness of the emergent themes

The student journals revealed a change in students' knowledge about advocacy, their attitudes towards the advocacy role and their perceived level of mastery of the advocacy competency. The following section will present the detailed account of how students evolved within each of the three themes.

3.1 Theme 1: Foundations of Advocacy Knowledge

Developing the foundations of advocacy knowledge consists of gaining insight into what advocacy is and how one might go about engaging in this role. Health advocacy can manifest itself in three domains; the micro or individual level, the meso or community level and the macro or societal level. In order to become effective advocates, students must gain an understanding of what their role would be in each domain as well as how to act as an advocate in each one. The journals revealed how students' knowledge about advocacy changed throughout the 15-week course. They became more aware of the various domains of advocacy and developed a deeper understanding of the advocacy role. Figure 2 demonstrates the foundations of advocacy knowledge that students constructed throughout the service learning course. Students developed an ability to define the role in each domain and could identify specific examples or meaningful experiences for each. They also developed a better understanding of the essential components of advocacy as well as the personal qualities that make a good advocate.

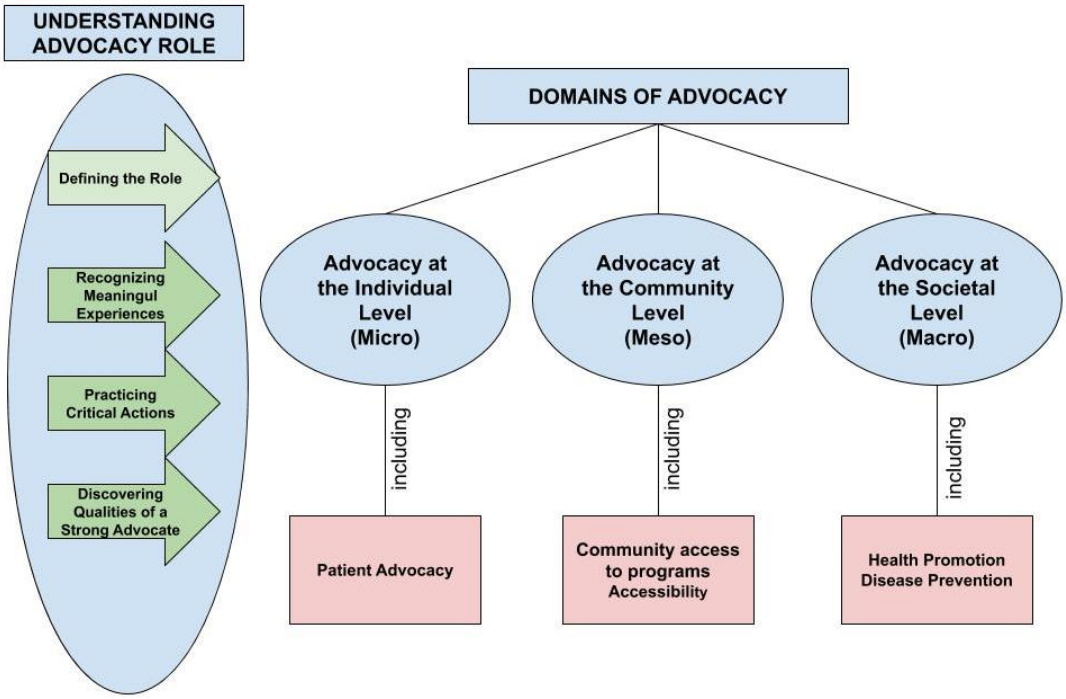

Figure 2: Foundations of advocacy knowledge

3.1.2 Domains of Advocacy

Students became more familiar with the notion that health advocacy can take place in three domains: the micro or individual level, the meso or community level and the macro or societal level. At the micro or individual level, advocacy consists of providing education and support with access to resources for one particular client. At the meso or community level, advocacy focuses on helping the community to meet its needs with respect to health services and exercise programming. Health advocacy at the macro or societal level aims to help the population in general through education, outreach, or policy change that can result in health promotion and disease prevention.

In week 1, students demonstrated some knowledge of the micro or individual level of the advocacy role, but they did not define it. Students presented many logical ideas of how they might engage in patient advocacy. This demonstrated a good base knowledge of this aspect of the advocacy role. However, in week 15, students were able to provide more

examples that went beyond usual rehabilitation services. They suggested actions like helping patients understand their needs and helping patients have a voice. They also wrote about how they would advocate for patients such as recognizing safety concerns, collaborating with the interdisciplinary team, reporting observations to appropriate team members and providing information about resources. The following quote from the fourth journal of Participant 5 captures the essence of how students described individual advocacy.

"I believe we must consider our patients as our priority and help them the best we can. Therefore, I think it is essential that we inform, empower, protect and support our patients whenever they need us." (Participant 5)

At the meso level, students developed an understanding of their role as advocates in the community. In week 1, students were not able to define the advocacy role in the community nor give specific examples. By week 15, students began to articulate how they could engage in advocacy in their communities. They defined this aspect of the role as ensuring people of the community had access to resources that encouraged health. This included working with people in the community to identify needs and inspire solutions. Students also began to speak about public advocacy. They began to realize the impact of inaccessible spaces on people with reduced mobility and recognized dangers that are present in the community. They went on to suggest that these are issues that they could advocate for in their cities. The following is a quote from Participant 17's fourth journal:

"We can educate people on healthy living and the benefits of exercise by creating exercise classes that incorporate education that can benefit the participants (as we do at St. Raymond's). Through these exercise classes, we can actively listen to the desires of the participants and identify holes in the community such as lack of activities, feelings of social isolation, not cleaning the sidewalks properly in the winter, etc. This can then allow us to take these concerns/complaints and encourage the community organizers to make changes

and better equip the participants with knowledge and skills that can help them in their daily lives." (Participant 17)

An evolution was also noted with respect to knowledge about advocacy at the societal or macro level. In week 1, students provided general examples of health promotion such as preventing injuries, avoiding a sedentary lifestyle, encouraging exercise and healthy eating. By week 15, students appeared to have a more developed conception of their role as advocates at the societal level. Their responses focused on how they would go about achieving some of the goals they mentioned in week 1. Students suggested meaningful activities such as teaching people how to reduce their risk for disease, modelling healthy behaviours, assisting with access to resources and facilitating an active lifestyle. They also provided new examples such as preventing elder abuse and reducing isolation. In the following quote, Participant 11 shares one of their ideas for advocacy at the societal level:

"Everybody in one way or another can benefit from information on their health and bodies and we are more than capable of providing it. I mentioned in my last journal about starting an open forum on social media for people to be able to speak openly about their health and have discussions and ask questions. I still believe this type of resource is lacking and I would be excited to initiate something like this once we have graduated." (Participant 11)

The recognition that advocacy can occur at these three levels contributes to a more complete understanding of the scope of advocacy as defined by the OPPQ (2009).

3.1.2 Understanding Advocacy

By week 15, students demonstrated a broader definition of the advocacy role. They reported that advocacy could be executed in many forms such as education, outreach, support, research, fundraising and political involvement. They also recognized that part of advocacy means promoting the physiotherapy needs of clients. Given this broader definition, students were able to recognize many rich and meaningful examples of

advocacy in their final journal. Some examples were experiences they had lived at St. Raymond community centre during the course. They described determining disease risk factors of individual program participants and providing them with valuable information that could help reduce this risk. They also provided some examples from their personal lives. One student recognized the needs of an elderly family friend and intervened by providing education and facilitating access to resources. Without intervention, this client would have been at serious risk of being socially isolated and physically inactive following a move to new place of residence. Other students described ideas they had for future advocacy projects. One student described an intergenerational project that would increase the sensitivity of young students towards seniors living in a residence.

By the end of the course, students also demonstrated a greater understanding of the essential components needed for successful advocacy. They suggested critical actions like engaging with clients, understanding clients, and showing patients that you believe in them even when no one else does. They reported the importance of establishing a trusting relationship between the client and PRT and how caring for one's clients can further motivate advocacy. Students also showed a development in their understanding of what makes a strong advocate. They suggested personal qualities such as being a good listener, empathetic, caring, assertive and having the desire to help as being qualities that would encourage strong advocacy outcomes.

By developing a more in-depth conception of the three domains of advocacy and a deeper understanding of what advocacy is and how it is carried out, students constructed a more robust knowledge base of advocacy. This rich knowledge was a contributor to students becoming more competent in their advocacy role.

3.2 Theme 2: Attitudes towards advocacy

Students' attitudes, meaning their way of thinking about advocacy and feelings towards the advocacy role of PRTs, also evolved by the end of the 15-week course. Changes were observed in the extent of awareness of the importance of advocacy, their

perceptions of the impact their advocacy could have and their interpretation of the advocacy role within the PRT profession. Figure 3 demonstrates the categories that emerged within the *attitudes towards advocacy* theme.

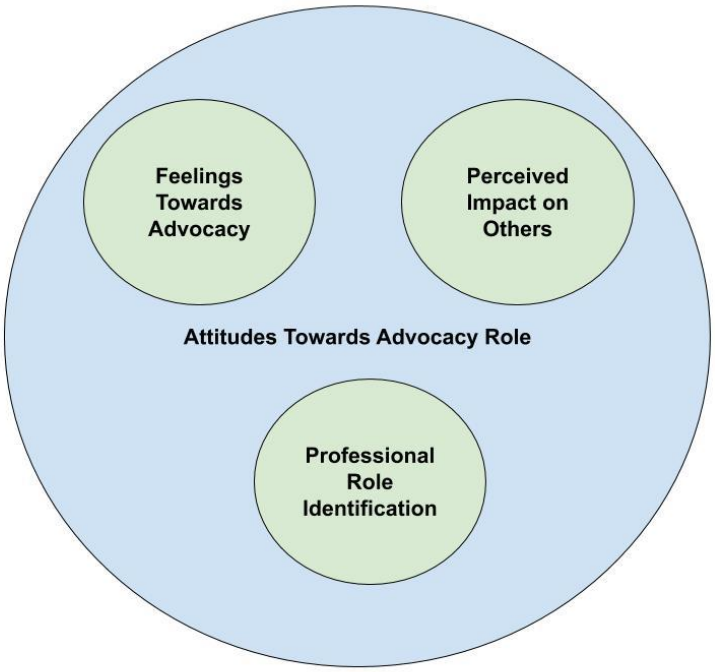

Figure 3: Emergent categories within the attitudes towards advocacy theme

3.2.1 Feelings towards Advocacy

While students recognized the importance of advocacy in week 1, a more meaningful appreciation for the role was evident in week 15. Students expressed the value of advocacy and the impact it can have on a vulnerable, geriatric clientele. The following quote from the fourth journal of Participant 9 demonstrates the depth of the feelings towards the health advocate role shared by many of the students:

"Advocating for me ,at this point is more than just a concept. It starts with a deep concern and connection with your patients/ participants" (Participant 9)

They expressed a desire to advocate through taking initiative, being willing to "help no matter what" and being "the best advocate (they) can be." Students expressed the importance of advocacy in ensuring well-being for all:

"It is extremely important to use our professional voice to make sure everyone is getting exactly what they need." (Participant 17)

3.2.2 Perceived Impact on Others

By week 15, students also expressed a sense of certainty that their advocacy could have a great impact. They wrote with conviction and postulated outcomes such as empowering communities to identify needs and find solutions, improved quality of life for people throughout the lifespan, and accessibility to public places for citizens with reduced mobility. By week 15, students displayed an air of optimism and confidence that their advocacy could inspire change. When referring to why it is important to advocate for the elderly, one student wrote:

"they are still part of the community and able to contribute, so giving them as much independence as we safely can is a key element in having a good and complete community." (Participant 13)

The students expressed a greater sense of hope when describing the outcomes and who could benefit from their advocacy. They spoke about the ripple effect that advocacy in the community can have:

"We organize the classes and encourage people in the population to come exercise regularly, and this eventually grows into more people coming and exercising." (Participant 7)

Students shared the perception that they can influence great change in terms of accessibility to public places. They also expressed confidence that speaking out on an issue will have an impact:

"I also think that talking about the subject will help raise awareness and lead to better health care." (Participant 1)

. They also believed that advocacy is not something that should be reserved for the elderly and that it is something to be considered throughout the lifespan:

"A more informed child and teenager turns into a more informed adult and in consequence, a more informed society." (Participant 1)

3.2.3 Professional Role Identification

In week 1, students recognized that advocacy is a professional responsibility. By week 15, students described a more robust perception of the advocacy role in the PRT profession. They began to see themselves as resource people and influencers that can impact societal health. They began to realize the potential that PRTs have to engage in prevention rather than only intervening in the rehabilitation phase of care. Students recognized their own assets of knowledge, ability to motivate and proximity to patients that make them poised to advocate. They also expressed a moral obligation to advocate by saying that failing to advocate could potentially place clients at risk. The following quotes from the fourth journals of Participant 16 and 13 reveal some examples of how the role evolved for students:

"So in the beginning, I was not too sure what advocacy meant, I had a brief idea. I was relating it more to a lawyer in a tribunal, to defend someone's right, but could not understand really how it could apply to us as PRTs. Now I know that it is really important to be the voice of our patient that cannot defend their own rights (mostly in CHSLD) but

also educate them, show them some resources they can have access and benefit from, promote health and I feel like there is so much more about advocating." (Participant 16)

I didn't know I would learn that much when the semester started. I thought that advocating was simply to respond to our patients needs. But now I understand that it's not only for patients, not only in clinic an not only for physio. It's everywhere, at anytime, and everyone benefits from it." (Participant 13)

3.3 Theme 3: Mastery of Advocacy Competency

As a result of the expanded knowledge and changed attitudes experienced by students, a progression in their competency with respect to advocacy was also observed. Changes were seen in their perceived level of competency and interesting ideas were captured about their competency development. It appeared that students entered into a reflective cycle in which they considered: skills that were important to advocacy, barriers that were present for their own advocacy proficiency, areas they could improve, what could facilitate this improvement and how competent they felt with this role. Figure 4 demonstrates this reflective cycle that emerged from the journal data.

Figure 4: Reflective cycle of advocacy competency development

3.3.1 Perceived level of competency

In the first journal, most students did not feel prepared to advocate for their clients. Many students expressed several barriers to their proficiency with respect to advocacy such as a lack of the knowledge and experience necessary to fulfill this role. Some students expressed fear of offending other health care professionals if they were to advocate for a patient in a clinical setting. They believed that they may be taken less seriously as they are students and not graduated PRTs. In journals 2 and 3, students identified several areas that they hoped to improve in order to be advocates that are more competent. This included elements such as communication skills, leadership skills, the ability to solve problems creatively and confidence in their own beliefs and opinions. Many students believed that through the collection of more experience and learning from the modelling of licensed practitioners, they would be able to improve their competency in this area.

By the fourth journal, students expressed greater confidence and preparedness to engage in their advocacy role. Not only did they thrive on the experience collected at St. Raymond community centre, but they began engaging in advocacy in other areas of their lives. Many students wrote about modelling healthy choices at home, encouraging and motivating their friends to get active and intervening when family members needed help. The following quote demonstrates a sentiment shared by many of the participants:

"I think that after this class, I feel more prepared than ever to advocate for this population. With the exercise class at the community center, I have seen what some people need and in what conditions they live. I think that in this class, I developed some ideas that I would like to try and do in my internship or in a future job." (Participant 4)

3.3.2 Reflection on competency development

When reflecting upon their own competency development with respect to the health advocacy role, students raised many interesting points. Firstly, students related their increased confidence and preparedness to engage in the advocacy role to the experience

obtained during the St. Raymond's project. They reported an increased awareness of the scope of advocacy in the PRT profession and greater insight into the needs of the Geriatric population. Secondly, during week 1, students described several factors that they believed would facilitate competency development. These factors included concepts such as gaining more experience, modelling practices of licensed professionals and increasing knowledge. Many of these elements were brought up in week 15 when students were describing how their competency had been developed.

Another observation of interest was made when examining the second and third journals. During weeks 5 and 10, students reflected on the development of their advocacy competency. They identified important skills that an advocate should possess and described areas in which they could improve. As part of this reflection, students described how they might improve these areas. This process was critical to the service learning model which uses the reflection in action principle to enhance competency development (Schon, 1986). In these journals, students demonstrated an increased awareness of some of the essential components of advocacy. This increase in knowledge helped them to focus their self-reflection and critically appraise their advocacy-related skills.

Students began the journey of advocacy development at different stages. At the start of the course, most of the students expressed a lack of confidence in their abilities to advocate. However, some students reported feeling confident due to prior experience they had obtained with family members or personal situations. Interestingly, regardless of the initial level of perceived competency, students demonstrated a change in their ability to advocate. For example, in week 1, Participant 5 reported feeling very confident in their abilities to advocate as seen with the following quote:

"I think I am prepared enough to advocate for geriatric clients. I feel a lot of empathy towards this population. It really touches me whenever I see them in distress and vulnerable."

While a lesser impact on this student's competency development may have been anticipated, an improvement in their level of competency was evident in their final journal:

"I have become more aware of their vulnerability in society and I feel a lot of empathy for this population. I am determined to advocate for them when they are in need. I am confident in my abilities to help them have their views and wishes genuinely considered when decisions are being made about their lives. I believe the 3 years in this program have provided me with the necessary knowledge and skills to provide the assistance and support elderly needs."

The idea shared by this student lends itself to a reflection shared by some students. Some students attributed their competency development to a combination of the experience obtained in this Geriatrics course as well as that collected in the Geriatrics rotation of their Clinical Education course. This idea could imply that perhaps the secret to richer advocacy competency development lies in a combination of both a service learning and a clinical education course.

CHAPTER SIX: DISCUSSION & CONCLUSIONS

1. Discussion

1.1 Impact of Service-Learning on Attitudes and Competency Development

Throughout the service-learning course, students engaged in a reflective cycle that led them to metacognitively evaluate their own competency with respect to the advocacy role. This reflection became more powerful as students gained deeper knowledge and developed a more championing attitude towards the advocacy role. With more knowledge, students could identify areas of their own competency that needed improvement and solicited resources to change them. With an increasingly positive attitude towards the advocacy role, they were more motivated to improve their shortcomings and improve their advocacy competency.

Although Dharamsi et al.'s (2010) work with medical students was conducted in the context of an international service-learning course, there are similarities in the outcomes of that and the present study. For example, one outcome identified by the authors is the greater sense of appreciation of the CanMEDS health advocate role. In the current study, students also demonstrated an increased sense of meaning and increased value for the role as they progressed through the course. Students developed a deeper understanding of what it means to advocate and became more empowered to take on this challenge. In addition, students described the importance of the experiential learning offered by service-learning in the development of their competence in the health advocate role which was evident amongst the medical students as well (Dhramsi et al., 2010). Similar to the findings of Stafford, Sedlak, Fok & Wong's (2010) study of urology residents, students of the current study also developed an increasingly strong sense of importance of the advocacy role. Advancing this idea even further, students began to feel a sense of obligation to assist patients, advocate for communities and help society in any way they could. Not only is health advocacy part of their jobs, it is part of being a good citizen.

Consistent with other studies in physiotherapy, this study demonstrated that service-learning provides students with important opportunities that allow them to experience advocacy which is critical to advocacy competency development (Michaels & Billek-Sawhney, 2006; Reynolds, 2005). As described by Reynolds (2005), service-learning creates a learning environment in which students can engage in experiential learning. The opportunity to interact with community-dwelling seniors and experience the advocacy role was valued by students in the current study as a means of improving their competency.

1.2 How Advocacy Competency Develops

Many of the students identified the service learning that they experienced in this course as a facilitator of advocacy competency development. This may be due to the meaningful experiences obtained by students which are supported by Fink's (2013) taxonomy for significant learning. Fink's taxonomy of significant learning is a framework that reminds teachers of the importance of creating quality learning experiences that result in students changing in an important way. The taxonomy consists of six categories of significant learning including foundational knowledge, application, integration, human dimension, caring and learning how to learn. As described by Barnes & Caprino (2016), students learn by making meaning of the world in which they live. By engaging in the critical reflection associated with a service-learning course, students get the opportunity to make sense of the experiences they have had and engage in significant learning. In consideration of Fink's (2013) taxonomy, students demonstrated significant learning in all six of the categories proposed by Fink. The following describes this learning through each element of the taxonomy.

Foundational Knowledge. At the beginning of the course, many students were describing advocacy in terms of the knowledge they had on the subject. This knowledge flourished as the semester went on and students began constructing their own ideas of how they could engage in advocacy within the three domains.

Application. As students constructed their knowledge on advocacy throughout the course, they got the opportunity to apply this knowledge on participants of the community centre program. As per Fink's (2013) taxonomy, this type of activity is a form of significant learning as students developed skills such as communication, leadership and critical thinking.

*Integration***.** Students showed signs of integration by the end of the 15 weeks as they made connections between what they were experiencing and their professional identity. They began to realize the extent to which they can inspire change. They discovered that their role was in fact to go beyond meeting patient's rehabilitation needs.

*Human Dimension***. T**he human dimension aspect of the taxonomy was especially evident in this course due to the personal connections experienced by the students and elderly community centre participants. Students worked closely to understand the realities of their clients and therefore learned a great deal about another generation of people. This also helped the students to learn about themselves as they critically reflected on how they could improve in order to effectively help their clients.

*Caring***.** According to Fink (2013), the element of caring refers to the development of new feelings and values. By the end of the course, students demonstrated elements of caring that were not present at the beginning of the semester. Students appeared more motivated and eager to participate in advocacy. They shared beliefs that their advocacy could make a difference and they were morally obliged to help. They described the meaningful connection that exists between an advocate and patient.

Learning How to Learn. In this course, students were encouraged to adopt the strategy of self-directed learning, which is the final element of the taxonomy of significant learning. Students demonstrated this aspect of the competency by sharing information with the instructor that they had discovered autonomously. Furthermore, some students

expressed the value they held for the reflective journals as these assignments helped the students to reflect on their own learning.

2. Implications

Some of the information generated by this study could inspire future research in the area of advocacy competency development. The Health Advocacy Questionnaire used in this study was adapted from the questionnaire created by Stafford, Sedlak, Fok & Wong's (2010). While the questionnaire captures the essence of how confident students feel about their role as health advocates, it may be difficult to pinpoint the specific shortcomings with respect to skills. For example, this study identified skills such as leadership, communication and listening skills as being important for advocacy. These may be interesting elements to include on another version of this questionnaire. In addition, students identified essential components of advocacy such as engaging with clients, understanding clients and establishing a trusting relationship. These critical actions are also skills that could be included on a questionnaire that measures advocacy competency. The development of such a tool could be a valuable resource when assessing advocacy competency and an effective means of giving feedback to students.

As service learning is currently not part of the regular curriculum, the information gained by this study could perhaps inspire curriculum planning in other CEGEPs that offer the Physiotherapy Technology program. By engaging with a service-learning course, students were sent into a reflective cycle that helped them to develop their competency with respect to the advocacy role. They constructed new knowledge about advocacy and adopted attitudes of good will, agency, and hope. This allowed them to further grow and transform into more confident advocates. With this newfound competence, students are better prepared to enter the workforce and advocate for their patients, their communities and society as a whole. Other healthcare programs may appreciate this pedagogical strategy as a means of encouraging better advocacy competency development in their students.

As mentioned in the literature, there is a need for more opportunities for students to get experience with advocacy in order to increase competence (Reynolds, 2005; Goulet & Tschoepe, 2018; Bodner, Rhodes, Miller, & Dean, 2013). This study shares some insight on how service learning may be a potential source of such experience. The experiences of the students in this course provided tangible examples upon which students could reflect. Service learning provided students with the context needed for them to critically appraise their own advocacy skills in an effort to improve. Other healthcare programs may choose to integrate a service-learning course into their curricula in order to give students context, concrete experiences and an opportunity to enter the reflective cycle of advocacy competency development.

When considering the implementation of such a course in curricula, several factors must be considered. Firstly, the importance of having a reliable community partner is of utmost importance. The community centre that participated in the current study was extremely accommodating and flexible. They provided ample accessible space, equipment and staff to run the weekly program with elderly participants. The centre also helped advertise the program to ensure adequate participant attendance. Secondly, student workload must be carefully considered to ensure an optimal experience for everyone. Given the fact that this is one of several courses being taken by students, it is important to be cognizant of students' stress levels and ability to commit to the course. This is important because if students are overburdened by an excessive workload they may be less willing or able to become engaged with this type of course. This may decrease the overall impact of the course on their competency development. In the current study, a small number of students were observed to be overly stressed and attended the course much less frequently than the other students. This type of behaviour may have been deterred had there been a slightly lesser workload. The final consideration that needs to be made is the support of the institution. For the current study, Dawson College was extremely supportive of the initiative. The college provided support with scheduling and communication to accommodate an off-site course of this nature. As this type of course involves students

travelling to and from campus, institutional support is supremely important as this type of course may not be able to proceed without it.

Should the momentum for this type of pedagogy eventually build and a greater number of healthcare programs opt to integrate service learning into their programs, the impact could be very positive. Firstly, students graduating from healthcare programs would be knowledgeable, open and confident in their abilities to advocate. They would recognize the need to advocate for people on multiple levels and be ready to engage in the necessary work. Secondly, with an influx of new professionals to the healthcare system that value health promotion, disease promotion, and preventing injuries, perhaps the population at large will begin to integrate the information they need to maintain health. With more knowledge and resources, people may be able to prevent some of those devastating diseases such as diabetes, heart disease and stroke. With people living healthier lives, there will be less stress on the healthcare system as people stay out of hospital and require less institutionalized care.

3. Limitations of the Study

The present study possessed certain limitations that may reduce the generalizability of its findings to other teachers. Firstly, the small size of the cohort that participated in this course was small (n=17). This led to a smaller number of study participants and therefore less data to analyze. Due to the small n seen in this study, the researchers relied on the qualitative data to support the significance of the quantitative findings.

Another limitation was that the qualitative data collected during week 1 was collected after quantitative data was collected and after the students had their first class. In this class, the St. Raymond's project was introduced, and students were made aware of the need for exercise and education in the community. This may have led students slightly when they went to write their first journal. In future, students should be assigned the first journal prior to the start of the course. This would ensure that any ideas shared in these journals would not be influenced by any information obtained from the first class or the

quantitative survey. However, the disadvantage to this method is that students may be less motivated to write the journal if the course has yet to begin. This could result in a lower percentage of participation.

4. Suggestions for Further Research

One potential area for further research would be to develop a survey that more specifically assesses gains in advocacy competency and changes in attitudes towards advocacy. Having identified key elements of advocacy knowledge, critical skills and specific attitudes about advocacy, this study may be a springboard for future research in this area. An interesting undertaking might be to create a modified version of the Health Advocacy Questionnaire created by Stafford, Sedlak, Fok & Wong (2010). This questionnaire could include specific skills such as leadership, communication, establishing trust and engaging with clients. Attitudes that might be identified by the survey could include empowerment, hope and willingness to intervene.

Another potential area of interest would be to explore the connection between Clinical Education courses and service learning courses. Although each type of course has its own unique properties, it would be interesting to discover how these types of courses complement each other in terms of advocacy competency development. As advocacy can manifest itself in many ways, perhaps, the most effective way of mastering advocacy is when the curriculum combines a service learning course with Clinical Education during the same term. This would be an idea to further explore.

5. Conclusion

In this study, third-year students of a Physiotherapy Technology program participated in a 15-week service-learning course at a nearby community centre. Students designed and executed an exercise program for elderly participants that frequented the community centre. Services offered to the seniors also included a health risk assessment and individualized education package. Throughout the experience, students reflected on the process of their advocacy competency development. Insights from this study demonstrated

an evolution with respect to knowledge and attitudes about advocacy that stimulated a cycle of reflection amongst students. This reflective cycle put students on a path of continuous competency improvement.

This study may inspire other programs to adopt this model in order to fill the gap that exists in Physiotherapy Technology program curricula. Although, health advocacy is one of the seven essential competencies required of physiotherapy professionals in Quebec, this role is not well-developed in physiotherapy program curricula. This role is not only essential to providing quality care to patients, but it is vital to the drive towards prevention that our society so desperately needs. With the population aging and the percentage of the population afflicted with preventable diseases increasing, it is crucial that students in health education programs learn about and practice health advocacy. If students are leaving school without adopting the attitudes and skills necessary to engage in health advocacy, educators in healthcare programs are contributing to the poor health of society. As described by Frank et al. (2010), schools need to be accountable for the graduates they turn out. Therefore, Physiotherapy Technology programs have the obligation to help students develop the knowledge, skills and attitudes necessary to fulfill the health advocacy role. Doing so will empower PRTs to engage in public health advocacy. Ultimately, this could have a dramatic impact on public health in the future.

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APPENDICES

APPENDIX A: Prompt Questions for Journal Responses

Journal 1: Week 1
What does it mean to be an advocate?
What role do TRPs play in the community?
How prepared do you feel to advocate for geriatric clients? Knowledge, experience?
Do you think it is important to advocate for clients? Why or why not?
Who would benefit from your advocacy and how would they benefit?

Journal 2: Week 5
How confident are you in your ability to be an advocate?
What elements of this ability do you want to improve?
How can you improve them?

Journal 3: Week 10 *(repetition of J2)*
How confident are you in your ability to be an advocate?
What elements of this ability do you want to improve?
How can you improve them?

Journal 4: Week 15 10 *(repetition of J1)*
What does it mean to be an advocate?
What role do TRPs play in the community?
How prepared do you feel to advocate for geriatric clients? Knowledge, experience?
Do you think it is important to advocate for clients? Why or why not?
Who would benefit from your advocacy and how would they benefit?

APPENDIX B: Health Advocacy Questionnaire

Thank you for agreeing to participate in this survey. Please answer the questions below. All responses are completely anonymous.

Please indicate to what extent you agree with the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. It is part of my job as a PRT to advocate for populations' health needs within society.					
2. I feel that my role as a health advocate extends beyond the individual patient(s) I am treating.					
3. I am able to identify the health needs of an individual patient during patient care (beyond physical rehabilitation needs).					
4. I can describe the health needs of the communities that I serve.					
5. I can identify the determinants of health (psychological, biological, social, cultural and economic aspects) of patients in my community.					
6. I can describe how public policy influences the health of populations that I serve.					
7. I can describe the requirements inherent in health advocacy, as described by the OPPQ (Ordre professionnel de la physiothérapie du Quebec)					
8. I understand the opportunities available for PRTs to function as health advocates.					
9. I am able to help my patient(s) navigate the health care system.					
10. My current competence in being a health advocate has increased compared to 3 months ago.					
11. My current knowledge about health advocacy has increased compared to 3 months ago.					
12. Compared to 3 months ago, I feel more able to practice health advocacy in ways I would not have otherwise done during a regular clinical rotation.					
13. The current likelihood of my engaging in health advocacy activity/activities has increased compared to 3 months ago.					
14. I am more likely to recommend health advocacy activity/activities to others compared to 3 months ago.					

15. **Demographic information**
Gender
__ Male __ Female __ Other

Age: _____

Previous education (Check all that apply)
__ High school __ CEGEP experience in another program __ University experience

*Questionnaire adapted from the Health Advocacy Questionnaire created by Stafford, Sedlak, Fok & Wong in 2010.

APPENDIX C: Information and Consent Form

Exploring Advocacy Development Through Service Learning

UNIVERSITY OF SHERBROOKE

Researcher:	Vanessa Gangai	vgangai@dawsoncollege.qc.ca	514-931-8731 ext 4729
Supervisor:	Christina Clausen	christina.clausen@mail.mcgill.ca	514-340-8222 Ext. 26015
Supervisor:	Amir Shoham	ashoham@crcmail.net	450-672-7360
Third-Party	Enza Pascale	Epascale@dawsoncollege.qc.ca	514-931-8731 ext 4031

Introduction

Physical Rehabilitation Therapists are required to demonstrate competency in seven different areas of practice. One of these areas, the area of advocacy, is often lacking in the curriculum of many Physiotherapy programs. Finding a way to address this gap in the curriculum is vital to ensuring that graduates of Physiotherapy Technology programs are competent and fully aware of their various professional roles

Purpose of the Research

You are invited to participate in this research that explores how Physiotherapy Technology students develop their advocacy competency during a service-learning course. This information will be used to plan future curriculum within the Physiotherapy Technology program. Participation in this study is voluntary.

What you would be asked to do

As part of the assessment tasks for the curriculum of this Geriatrics course you will be asked to write several journal reflections. Should you agree to participate in the study, your journal responses will be analyzed in an effort to answer the research questions. This analysis will take place in January 2019, once the course has been completed and final grades have been submitted. Your participation in this study will have no bearing in your standing or academic success in the course. In addition, participants of the study will also be asked to complete a short survey (approximately 10 minutes) during Weeks 1 and 15 of the course that will measure respondents' perceived level of competency and attitudes towards the advocacy role. All data will be collected electronically by a third party in order to ensure your anonymity. The third party will give your survey a participant code and remove your name. This will allow the two surveys to be compared while removing any link to your identity. The link between your identity and your participant code will be securely stored by the third-party and not shared with anyone.

Potential Risks

This research is considered minimal risk. There are no known risks associated with your participating in this study.

Potential Benefits

There are no direct or indirect benefits associated with your participation in this research.

Voluntary Participation and Withdrawal

The decision to participate in this study is voluntary. The decision to participate or to refrain from participating will have no bearing on your grades or academic success. If you choose to participate and later change your mind, you can withdraw from the research at any time. Should you wish to withdraw, please

contact the third-party, Enza Pascale (contact info above)) by email and inform her of your decision. She will ensure that any data related to your previous participation be destroyed.

Confidentiality and Anonymity
Confidentiality will be respected. No information that discloses your identity will be released or published.

Data collected through this study will include the following: Demographic (i.e. age, gender, education level), journal responses and survey results. All data will be accessed through a third party (Dawson instructor from another department). The records of this study will be kept strictly confidential and anonymous. Research records will be collected by the third party, coded and electronically stored securely using a password protected file on the Dawson H: drive. All anonymized data will be transferred to the researcher and analyzed in January 2019. The researcher will only receive anonymized data and will therefore have no knowledge of the identities of study participants. The intonation will be used to complete a final project towards a Masters in College Teaching for the University of Sherbrooke. Data collected by this project may be published, used with other data sets, and/or used in a future study, or series of studies, on the research topic. However, participants will not be identified in future publications or presentations.

Participants' Rights
You have the right to ask questions at any point before, during or after the conclusion of the study. Participants also have the right to withdraw from the study at any time without penalty. Should you have any questions about this research project, please do not hesitate to contact Vanessa Gangai by email at vgangai@dawsoncollege.qc.ca, by MIO or by phone at 514-931-8731 ext. 4729.

This research has been reviewed and approved by the Dawson College's Research Ethics Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. Should you have any questions or concerns about this process or about your rights as a participant in this study, please contact the Dawson College Research Office at research@dawsoncollege.qc.ca.

Support Professionals External to Project
Participants may contact Dawson **Counseling Services** if they wish to access such support as a result of their participation in the research project. Participants are invited to attend the Counselling drop-in hours, which may be found on the My Dawson portal.

Participants may contact the following qualified Ombudsperson in the event that they wish to file a complaint arising from their participation in the research project.
Name and Title: Kalie Rae, Ombudsperson
Contact information: ombudsperson@dawsoncollege.qc.ca or 514-931-8731 ext 1191, office: 4E.2-2

Statement of Consent
I have reviewed the contents of this consent form. I am aware of the study's purpose, what I am asked to do, as well as the risks and benefits of study participation. I have had the opportunity to ask questions, and my questions were answered. I am aware that I can withdraw from this study at any time. I do not give up any rights by participating in this study. I agree to take part in this study. I will receive a copy of this signed consent form for my records.

_____ _____ _____

Signature Name (Please print) Date

APPENDIX D: Certificate of Ethical Acceptability

Research Ethics Board
Room 4B.01-9
3040 Sherbrooke Street West
Westmount, QC H3Z 1A4
(514) 931-8731 x1416
rebapply@dawsoncollege.qc.ca
https://dawsoncollege.qc.ca/reb

Certificate of Ethical Acceptability of Research Involving Humans

Certificate Details	
Study ID: GANGV1819146	**Application ID:** 160216
Study Title: EXPLORING ADVOCACY THROUGH SERVICE LEARNING	
Type of Application: New Study	**Review Level:** Full Board Review

Research Team	
Principal Investigator: Gangai Vanessa (Physiotherapy Technology)	**Status:** Faculty Researcher
Co-Investigator(s): Shoham Amir (Université de Montréal); Clausen Christina (University of Sherbrooke)	

Provisions

If completed, this section contains any additional administrative and/or ethical provisions that are applicable to the study.

•

Comments

No additional comments.

Ethics Approval Period

September 21, 2018 to September 20, 2019

Application Document List

The following documents underwent ethics review.

Document Description	Type	Date	Reviewed
EXPLORING ADVOCACY THROUGH SERVICE LEARNING	Application	2018-07-23 22:42:00	☑
Treatment of Concerns of Dawson REB	Revisions	2018-09-18 13:45:00	☑
EXPLORING ADVOCACY THROUGH SERVICE LEARNING	Revisions	2018-09-18 13:45:00	☑
Revised-Information and Consent Form	Revisions	2018-09-18 13:45:00	☑

IMPORTANT INFORMATION – Please read carefully

The Research Ethics Board at Dawson College examined the aforementioned research project. This application was approved in accordance with the requirements of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (2014) and the Dawson College Policy on the Ethical Conduct of Research Involving Humans (2011).

This certificate does not in itself constitute authorization for the research to proceed. As of the 2015-2016 academic year, Dawson College has two separate review processes (Institutional Review and Ethics Review). In addition to research ethics review conducted by the Dawson College Research Ethics Board, applications will be reviewed by the Academic Dean, through the Research Coordinator to ensure that the College is able to support the proposed research. It is the researcher's responsibility to ensure that they receive institutional

authorization to conduct research involving human participants as well as maintaining continuing ethics approval.

Annual Renewal: All research involving human participants requires review on an annual basis. An Application for Renewal of Ethics Approval form should be submitted at least one month before the above expiry date. An annual report must be included in your application. Applications for renewals will not be considered without an annual report.

It is the responsibility of the researcher to maintain ethics approval throughout the life of the study. Consequences of not maintaining ethics approval may result in the termination of ethical oversight. Consequences pertaining to the termination of ethical oversight include (but are not limited to) the suspension of research funds, and/or the suspension of research activities.

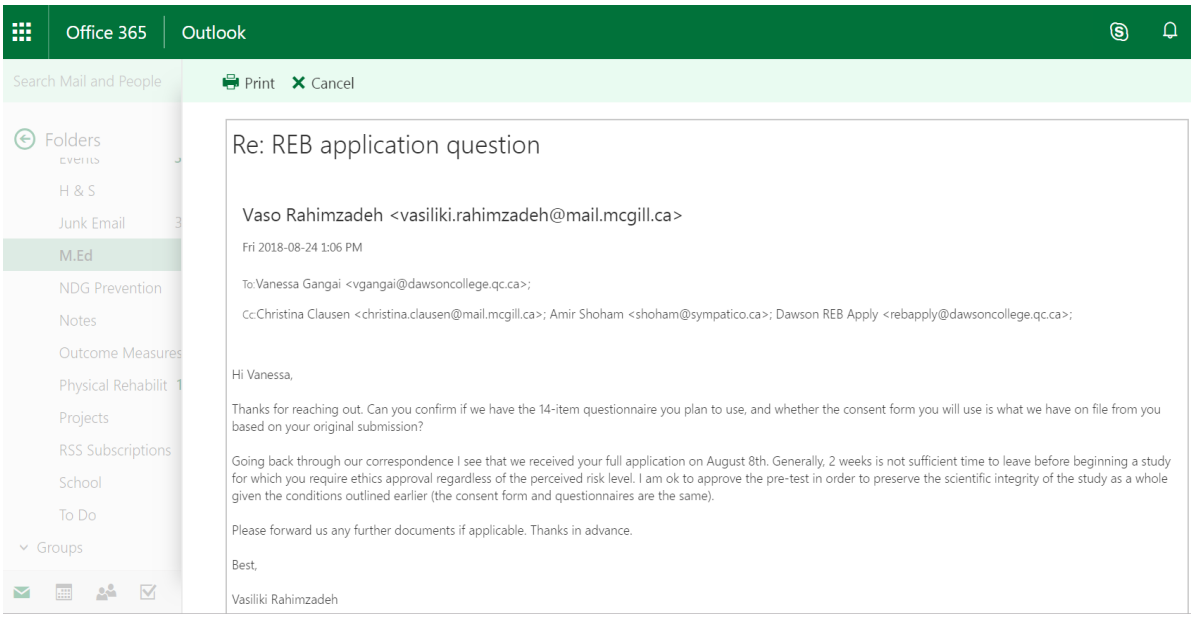
Study Closure: When a study has been completed or terminated a Research Study Closure Form must be submitted within one month of the study's completion or termination date.

Unanticipated Events: Should any unanticipated developments or events occur during the course of the study, the REB Office must be notified within a reasonable timeframe.

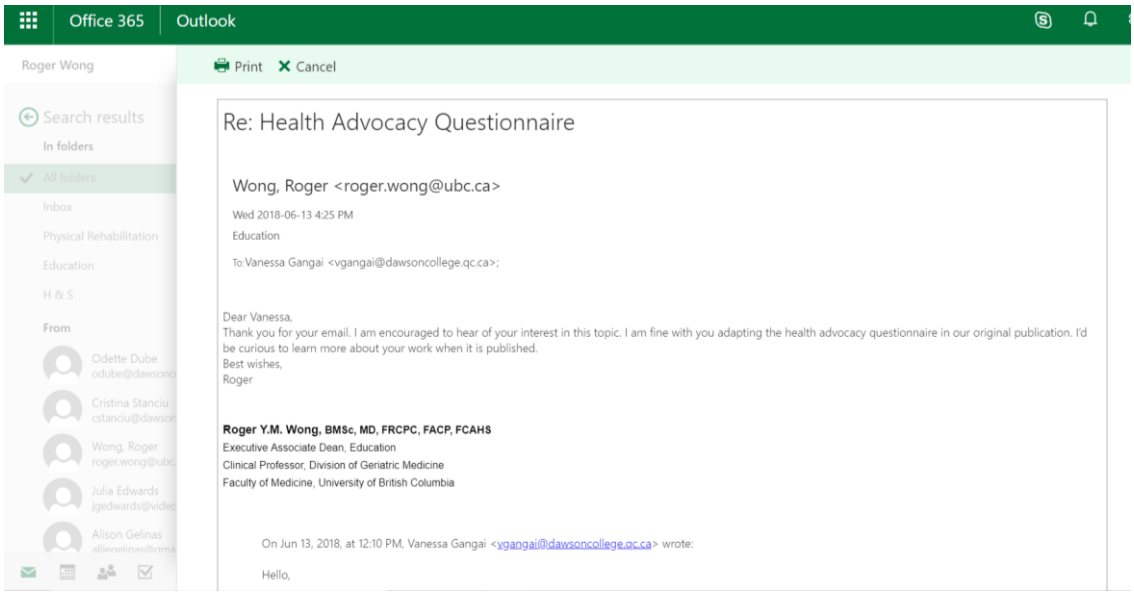
Modifications: Any modifications prior the annual renewal must be approved by the REB prior to implementation.

Vasiliki Rahimzadeh, PhD (c)
Chair

APPENDIX E: Email correspondence from Dawson Research Ethics Board



APPENDIX F: Correspondence with Dr. Roger Wong



APPENDIX G: Program Brochure for the Physiotherapy Technology Program at Dawson College

9 – 144.A0

Physiotherapy Technology

DAWSON COLLEGE

Description

The Physiotherapy Technology program is a three-year career program that prepares students to work with physicians and/or physiotherapists to aid in the recovery of patients. As healthcare professionals, physiotherapy technologists combine in-depth knowledge of the human body with specialized hands-on clinical skills to intervene in cases of illness, injury and/or loss of normal function in the neurological, musculoskeletal and cardiopulmonary systems.

The goal of physiotherapy technologists is to obtain optimal functional performance regarding a patient's strength, movement, mobility and overall well-being.

Upon successful completion of the Physiotherapy Technology program graduates will be able to:

- Offer professional services to clients
- Adhere to the regulations set forth by the Professional Code for Physiotherapists
- Intervene within their scope of practice in the physiotherapy process of clients
- Demonstrate an understanding of ethical issues and relate them to the ethical and legal standards of the practice established by the professional order
- Adapt the clinical approach to the specific characteristics of a client's environment, physical and/or mental condition and world view
- Collaborate with members of a multidisciplinary health care team
- Communicate in English and French, particularly in the practice of physiotherapy
- Demonstrate a commitment to continued personal and professional growth
- Effectively manage the emotional and physical demands of the profession
- Demonstrate an understanding of the health and safety concerns of the workplace
- Demonstrate an understanding of lifestyle behaviours that promote health and be able to relate them to client care
- Demonstrate critical thinking and problem-solving skills

Career Opportunities

Physiotherapy technologists can work in a variety of settings, including:

- Hospitals
- Short-term care facilities
- Clinics
- CLSCs (*Centre local de services communautaires*)
- CHSLDs (*Centre d'hébergement et de soins de longue durée*)
- Rehabilitation centres
- Private physiotherapy clinics
- Private homes

Physiotherapy Technology

Dawson College

Course List

YEAR 1 – TERM 1

- Introduction to the Profession & Auxiliary Care
- Human Biology I
- Anatomy I: Osteology & Arthrology
- Physics for Physical Rehabilitation Therapy

English
French
Complementary

YEAR 1 – TERM 2

- Human Biology II
- Anatomy II: Myology
- Physiology
- Human Biomechanics

English
French
Humanities
Physical Education

YEAR 2 – TERM 3

- Pathophysiology in Physiotherapy Technology Therapy
- Intervention: Loss of Function
- Intervention: Loss of Mobility
- Intervention: Loss of Muscle Function
- Intervention: Pain & Circulation
- Electrotherapy
- Kinesiology

English
Physical Education

YEAR 2 – TERM 4

- Orthopedic Rehabilitation: Extremities
- Orthopedic Rehabilitation: Spine and Pelvis
- Communication & Interpersonal Interaction
- Neurology and Geriatrics
- Clinical Education I

English
Humanities

YEAR 3 – TERM 5

- Intervention:
- Vascular & Respiratory Conditions
- Physiotherapy Technology & Geriatrics
- Physiotherapy Technology & Therapeutic Relations
- Special Topics in Physiotherapy Technology
- Clinical Education II

Humanities
Physical Education
Complementary

YEAR 3 – TERM 6

- Internship I
- Internship II

Every student must take four English courses, two French courses, three Humanities courses, three Physical Education courses and two Complementary courses to receive a CEGEP Diploma.

Admission Requirements

What you need to apply

A Diploma of Secondary Studies (DES) or academic background judged equivalent to the DES.

Specific ministerial admission requirements*

- **Sec IV Mathematics - Cultural, Social & Technical option 563-404/414**
- **Sec V Physics 553-504**

** For students graduating before June 2010 or from an Adult Education Centre, the pre-requisites are Mathematics 436 and Physics 534*

Additional admission requirements

- Must be eligible to take College English 603-101 and Basic French 602-100 (testing may be required)
- You must submit a 200-300 word handwritten letter addressing the reasons for applying to this program, how your personality, talents and interests will help you succeed in this self-directed learning environment, any personal experience with the profession (work and/or volunteer), and career plans upon graduation

Application Deadline: March 1 for the Fall semester.
All career/technical programs follow a set sequence of courses and therefore only accept applications to begin in the Fall semester.

About Dawson College
Dawson College is located in Downtown Montreal in a historic building on 12 acres of green space. The first English-language institution in the Quebec CEGEP network is today one of the largest with approximately 10,000 students enrolled in more than 50 programs and profiles of study. The College occupies an entire city block and is linked directly to the Atwater Métro station.

Dawson College
3040 Sherbrooke St. West
Montreal, Quebec H3Z 1A4
T 514 933 1234
dawsoncollege.qc.ca
admissions@dawsoncollege.qc.ca

Fees
Tuition is free for Canadian citizens or landed immigrants with permanent residence in Quebec taking at least four courses per semester. A non-refundable $30 application fee and about $200 in student fees are charged. Books and supplies cost between $500 to $1,000 per year, although visual arts supplies are more costly. Financial aid is available; contact (514) 931-8731 ext. 1186 for more information. Fees are subject to change without notice.

DISCOVER